

ENVIRONMENT

Title: Impact of Odor and Dust on Pig Performance - **NPB #00-065**

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Date Received: 6/25/2001

Abstract

A research project to determine whether ozonation of air in a swine nursery has impact on dust, odor, and pig performance was undertaken at the Michigan State University swine research facility. One objective was to obtain baseline data for in-house dust, hydrogen sulfide, ammonia, and bacteria for a pull-plug system. A second objective was to compare these data with that of an untreated facility with regard to the level of gases, dust, and performance.

There was no significant difference in ammonia between the two treatments, and in both cases the measured concentrations were always less than 20 parts per million. Dust levels in both treatments were quite low and there was no difference. Hydrogen sulfide levels were significantly less in the ozonated treatment with levels generally about 100 parts per billion (ppb) whereas in the control the levels averaged about 400 ppb. The average daily gain and feed efficiency was better in the ozonated treatment than in the control, but there was inadequate replication to state that the differences were statistically significant.

These research results were submitted in fulfillment of checkoff funded research projects. This report is published directly as submitted by the project's principal investigator. This report has not been peer reviewed

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